

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled) A medical device comprising:  
a structure for insertion into a living organism; and  
at least one radioprotective compound affixed to  
the structure, the at least one radioprotective compound  
eluting from the structure and entering the surrounding  
tissue to protect the tissue from ionizing radiation.
2. (Cancelled) The medical device according  
to Claim 1, wherein the structure comprises a stent.
3. (Cancelled) The medical device according  
to Claim 1, wherein the structure comprises a stent-graft.
4. (Cancelled) The medical device according  
to Claim 1, wherein the at least one radioprotective  
compound includes compounds comprising sulphur.
5. (Cancelled) The medical device according  
to Claim 4, wherein the at least one radioprotective  
compound comprises aminothiols.
6. (Cancelled) The medical device according  
to Claim 5, wherein the at least one radioprotective  
compound comprises amiphostine.
7. (Currently Amended) An implantable  
medical device comprising:

a metallic stent;  
a polymeric matrix affixed to the surface of the metallic stent; and  
at least one radioprotective compound incorporated into the polymeric matrix, the at least one radioprotective compound eluting from the polymeric matrix over a given time period and entering the surrounding tissue to protect the tissue from ionizing radiation, the at least one radioprotective compound configured to elute to only reach and protect local cells while not protecting proliferative cells.

8. (Original) The implantable medical device according to Claim 7, wherein the polymeric matrix comprises a fluoropolymer.

9. (Original) The implantable medical device according to Claim 7, wherein the polymeric matrix comprises first and second polymers.

10. (Original) The implantable medical device according to Claim 9, wherein the first polymer comprises a fluoropolymer.

11. (Original) The implantable medical device according to Claim 9, wherein the second polymer comprises an acrylic.

12. (Original) The implantable medical device according to Claim 7, wherein the at least one radioprotective compound includes compounds comprising sulphur.

13. (Original) The implantable medical device according to Claim 12, wherein the at least one radioprotective compound comprises aminothiols.

14. (Original) The implantable medical device according to Claim 13, wherein the at least one radioprotective compound comprises amiphostine.